

Nuisance Algae (Cladophora) Public Forum

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Lakeshore Technical College

Cleveland, WI

Welcome

Chuck Ledin, Director, Office of Great Lakes

Welcome and thank you for your interest. We are here because a few concerned residents of Manitowoc decided to make a trip to Marinette a few years ago to dump a pile of rotting Cladophora in front of Mike Friis and me. At the same time they expressed some frustration about the loss of beach usage and lack of attention by state government to their concerns. That energy and concern prompted much of the work you will hear about today.

As a life long resident of Wisconsin, I would like to start today by sharing about 50 plus years of personal observations of Lake Michigan.

- Lake Michigan is a fabulous body of water and it is part of a unique aquatic system. At one time, sturgeon were present in huge numbers and commercial fishery activities thrived all along the coast. But the last 60 years brought great change.
- I grew up in the 50's in when no one went near the water of Lake Michigan. The rivers feeding the lake were full of pollutants to the extent that the sight and smell were offensive. But even then, I do remember a trip on the old car ferry to Michigan and marveled at the crystal clear water when we were out of site of any shoreline.
- But the 50's were the heyday for sea lampreys which devastated the fishery for lake trout following the opening of the St. Lawrence seaway. However, there were still perch to be caught..
- Various studies were done in the 60's and 70's resulting in a cry for control of phosphorus from sewage treatment plants. Wisconsin began issuing correction orders and some progress was made. The international joint commission began to call for phosphorus controls at all large treatment plants.
- Following passage of the Clean Water Act and resultant development of federal and state regulatory, management and funding programs, we began to see differences in our waterways. With phosphorus control, nuisance algae was greatly reduced. The beaches became a great place to play. However, instead of algae, the next plague followed when our beaches became fouled with dead alewives.
- To combat this problem, the Great Lakes states utilized a biological approach by planting pacific ocean trout and salmon to feed on the alewives. This approach was successful beyond anyone's predictions and a wonderful trophy fishery was created. Unfortunately the trophy status was later marred by the growing knowledge that these fish accumulated polychlorinated biphenyls and other pollutants in the fatty tissues to the extent that consumption advisories were needed.
- Then we found the salmon suffering from kidney disease and some food chain shifts from alewives to lake herring or chubs or other species. But other stocking efforts led to other fishing successes like walleyes in Green Bay.

- .Meanwhile, although we have tried for years to restore reproducing lake trout through stocking and careful harvest management, that goal eluded us.
- While the alewives pretty much disappeared, new problems developed. Now Zebra mussels washed ashore preventing anyone from going barefoot on the beaches and decomposing mussels perhaps encouraged bird scavengers to spend more time patrolling the swimming beaches and through their feces cause pathogen water quality problems.
- Then the yellow perch populations crashed. And to further our problems, Cladophora came back and in some areas with a vengeance.
- I have been at DNR for 32 years and the one thing I know about Lake Michigan is we have a limited understanding of how the system works. Some of this is due to the size of the lake and very long response time, which is a part of every change or new stress on the system. A second problem is that the only thing constant about the lake is that it is in constant change influenced by a variety of factors, some of which we know little about like new exotic species. We always end up reacting to a change with little ability to predict future conditions. We have long term information, which shows a long cycle of water level changes differing by as much as 5.5 feet. We are only recently beginning to have a better understanding of the importance of this cycle to coastal wetlands. We have rarely had the tools or information for these long term changes or cycles, which extend beyond the length of our lifetimes. Thirty two years is barely a blink for this system. With a retention time of 99 years, changes may take a lifetime to notice or more problematically more than a lifetime to correct. From this one thing is clear to me. Managing today's issues in Lake Michigan is about long term campaigns with expectations for results based on patience.

Today you will get a chance to hear about some really excellent team efforts to better understand what is happening in the lake. The good part is we are getting smarter. The bad part is there may not be a silver bullet. So I would like to end with a few last thoughts:

1. When the Clean Water Act passed, people said the goals were unrealistic and unachievable. Eleven years and five billion dollars of investment made Wisconsin the first state in the nation to meet the national deadlines. We can successfully deal with Cladophora but our expectations must be realistic in the context of management efforts which merely influence rather than direct this huge system—in short it will take time. But we can have hope.
2. We do not fully understand phosphorus responses in aquatic systems to the point where we can say with certainty that level X will solve all the problems. We do know however, that phosphorus fertilizers have greatly increased and that some of that phosphorus makes its way to our waters and I can say with certainty that less phosphorus will result in improved water quality over time

So with that I hope you find this session today useful and hope you will take this opportunity to ask questions and provide reactions to the information which will be presented. Thanks again for your interest.